An Investigation on Digital and Print Reading Attitudes: Samples from Filipino Preservice Teachers from a Non-metropolitan-based University

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Abstract

Much of formal learning is realized through reading. In the present context, there now exist versions of reading – the digital- and print- based. This descriptive-quantitative-correlational investigation purposed to determine the difference between attitudes toward reading across versions, and difference in the attitudes toward types of reading between males and females. Moreover, the study also aimed to determine a significant relationship between attitudes toward reading in varied platforms, and attitudes toward reading types and the socioeconomic status of the respondents. The study enlisted 308 preservice teachers with age range of 18-25 (mean age = 22.87, standard deviation = 2.22). The

cross-sectional investigation employed the classic technique of data gathering – the use of a survey tool adopted from Eijansantos, Alieto, Dela Rama-Morgia, and Dela Rama-Ricohermoso (2020). The study revealed the following results : (1) there is significant difference in the attitudes toward reading versions with attitude toward print reading reported to be better by the respondents; (2) there is no significant difference in the attitudes toward reading types across gender (male and female); (3) there is significant relationship between the attitudes toward versions of reading and the respondents' socioeconomic status with negative and linear relationship as regards attitude toward print reading and SES , and positive and linear relationship with respect to attitude toward digital reading and SES; and, (4) there is significant, positive and linear relationship between attitudes toward reading types. Discussions are provided herein.

Keywords: Attitude, Digital, Print, Reading, Digital Contents

Introduction

It could be supposed that much of formal learning is realized through reading; hence, Rogiers, Van Keer, and Merchie (2020:2) forwarded the idea that to make learners competent readers is an '*important educational goal.*' This claim is founded on the understanding that reading is one of the basic skills of information literacy (Mizrachi, 2015). In fact, reading is considered as the cornerstone of education upon which learning is laid (Berninger, & Richards, 2002).

Previously, reading is only limited to printed materials. However, the dawning of digital technology has made it '*not just a matter of books and paper*' (Martinez, & Lopez-Rio, 2015:105) as it has become possible to read without taking hold of a physical book, magazine or other sorts of printout. This version of reading is performed with digital contents aided by a digital device. Thus, it could be deduced that two types of reading now exist. The modern and new type identified as digital reading, and the classic and traditional one known as print-based reading.

With this as backdrop, determining the attitudes toward the versions of reading is an interesting research endeavor considering that attitude, as an affective factor, is associated with learning achievements (Chotitham, & Wongwanich, 2014) and the

development of the different skills in reading (Nootens, et al., 2019). Moreover, Chotitham, and Wongwanich (2014) pointed out that different research investigations have confirmed that reading attitude is the most significant factor affecting reading. Noticeably, attitude towards reading is a topic extensively investigated. Some of the recent research works on the topic include the studies of Yurdakal (2019) which investigated the relationship between the attitude toward reading and the perceptions of creative reading with a sample group consisting of 319 primary students; Ulu (2019) which explored the relationships between the attitudes toward reading and reading habit, metacognitive awareness of reading strategies and critical thinking among 165 preservice teachers; Hu, Wu, Curby, Wu, and Zhang (2018), as one of the objectives of their study, probed the relationship of attitude toward reading and literacy achievement among 567 Chinese kindergarten; Nootens, et al. (2019) which gauged the reading attitudes of 469 French-speaking pupils across transitional period; Yıldız, and Kızıltaş (2018) which, as one of the objectives of the study, looked into the relationship between students' attitude toward school and attitude toward reading; and Navarrete (2018) which, utilizing an experimental design, aimed to determine a difference in attitude toward reading after subjecting 37 low performing tertiary students in an Intertextual Reading Intervention (IRI) program.

However, no investigation was carried out to determine the difference in the attitudes toward print and electronic reading with the study of Eijansantos, et al. (2020) as one of the few exceptions. It is remarked that the study was with senior high school students as opposed to this current investigation conducted with preservice teachers as sample group. The choice of the respondents of the study is influenced by the claim of Yıldız, and Kızıltaş (2018) that attitude and behaviour of teachers could be imitated by students. Similarly, Brooks (2007) maintained that when teachers are active and passionate readers their students are likely to display similar behavior. This is inferred to hold true as regards reading attitude. Therefore, the need of determining attitudes of preservice teachers who would eventually be enlisted, sooner or later, as regular faculty of academic institutions come to the fore. Along this line, it is a pressing concern to determine the attitudes of would-be teachers toward two types of reading as their attitude may potentially influence those of their future students.

Hence, this study aims to add to the limited collective body of knowledge on attitude toward versions of reading among preservice teachers. Moreover, the current investigation aimed to determine whether there is significant difference in the attitudes of the respondents with respect to types of reading, whether there exists a gender divide as regards the attitudes toward versions of reading. Additionally, the study also purposed to determine whether a significant relationship exists between attitudes toward reading types, and whether a significant relationship could be drawn between the attitudes of the respondents toward reading versions and their SES.

Literature Review
On Reading

Expressions such as '*a basic tool of learning*' (Erdem,2015:3983), '*a lifelong skill to be used both at school and throughout life*' (Küçükoğlu,2013:709), '*a lifelong skill for academic learning and success in school*' (Banditvilai,2020:46), '*a cornerstone for students' success in the college life*' (Rahmawati,Rosmalina,&Anggrain,2020:90), '*an important language skill*' (Kuşdemir & Bulut,2018:97), '*a fundamental skill that is essential for successful education*' (Boakye,2017:158), and '*a gateway to every students to learn different subjects*' (Barred,2019:65) are associated with reading. These underpin, in an individualistic sense, the need for one to acquire and hone the skill as gaining the ability to read has become non-negotiable - because as language is '*a powerful tool for communication*' (Devanadera & Alieto,2019:513) and important in education (Abdon, et al.,2019; Alieto,2018; Alieto, Devanadera,&Buslon,2019; Perez & Alieto,2018; Saavedra,2020a;2020b; Somblingo & Ricohermoso,2019) so is reading in learning. Moreover, although writing is the most preferred means for formal communication (Rillo & Alieto,2018) and the macro skill indexing proficiency in language use (Saavedra & Barredo,2020), reading is an indispensable part of education – it (reading) is a receptive skill essential in the academic life of students (Tendero,2019).

Reading acitivity is believed to commence when one starts schooling and continues for a lifetime (Erdem,2015). It is a means of information and knowledge acquisition (Boakye,2017). Addedly, it is a process that begins with perceiving visible symbols (Kuşdemir & Bulut,2018), and concludes with comprehension (Tavakoli &

Hayati,2011 in Buslon & Alieto,2019; Kuşdemir & Bulut,2018). Reading entails a throng of processes such as '*word recognition, finding the main idea, understanding the details, recognizing the structure of the text and predicting the idea of the author, grasping the importance of the ideas in the text…*' (Kuşdemir & Bulut,2018:12). Additional to the list are the processes like inferring meaning of unfamiliar words (Buslon & Alieto,2019), employment of experience (Gatcho & Hajan,2019), utilization of strategies like skimming, scanning, and prediction (Wallace,2007 cited in Roomy & Alhawsawi,2019). Deductively, reading is a complex task to perform (Chaudhry & Al-Adwan,2019; Miller & Schwanenflugel,2006).

On another note, St Clair-Thompson, Graham, and Marsham (2017) noted, as surveyed through the literature, that there is sparsity of reading among learners today. To put it in another way, students do not frequently read. Relative to this, Chaudhry and Al-Adwan (2019) reported that reading is not popular among students. This is supposed to be true among ESL and EFL readers who were reported to claim reading as a frustrating activity (Rahmawati,et al.,2020). Against this, it is imperative to identify the attitudes toward reading types of pre-service teachers who would soon likely be at the grassroots level of the educational system (Torres & Alieto,2019a; Torres,2019; Torres & Medriano, 2020), and would be influential especially with regard to their future students.

On Digital Reading

Electronic reading is a modern means of associating symbols, signs and letters with meaning performed through screened gadgets. This practice was not possible prior to the coming of technology which birthed modern-day devices such as but not limited to personal computers, laptops and smartphones. As technology use expands, computers have become a common resource in schools (Gil-Flores,Torres-Gordillo,&Perera-Rodríguez,2012; Dundar & Akcayir,2012), reading practice has been altered (Liu,2012; Ramdarshan Bold & Wagstaff,2017) and revolutionized (Benedetto,et al.,2014). Despite being a relatively new version of reading (Lim & Jung,2019), Støle, Mangen, and Schwippert (2020) claimed that, in most cases, print reading has been replaced with digital reading. This is especially true in the context of educational settings as on-screen reading is steadily becoming a prevalent practice

(Delgado,Vargas,Ackerman,&Salmerón,2018; Halamish & Elbaz,2019). This is evidenced by the move of university libraries to shift from the use of print materials to electronic ones (Dundar & Akcayir,2012), the steady climb in the percentage of people owning e-reading device (Rainie & Duggan,2012 in Ramdarshan Bold & Wagstaff,2017), and the obvious and consistent growth of digital contents (Chen & Chen,2014). People who cannot access these electronic resources are boxed out from essential information and understanding (Naumann,2017). Inevitably, digital reading is becoming a must-do practice. Liu (2012) observed that screen reading is turning into an everyday practice, and that learners are becoming proficient at it. Through inference, in this contemporary time, students are required to gain a skill previously not demanded – the ability to access electronic materials (Lim & Jhung,2019). Digital reading then is the version that is associated with ICT knowledge and skill (Costa & Araújo,2016). Lim, and Jhung (2019) claimed that attitude toward digital reading is influenced by ICT related variables such as attitude toward computer use and ICT ability.

Although both versions of reading share certain commonalities such as both involve cognitive processes like decoding and interpreting nuances of language (Lim & Jhung,2019), digital reading has its share of unique features. Digital reading provides affordances not found in text-based reading (Sullivan & Puntambekar,2015). One of which is that digital texts could be hyperlinked which facilitates navigation and organization of contents. It must be remarked along this line that such is not always a good thing. Carr (2010) claimed that this results in shallow reading. Similarly, Hahnel, Goldhammer, Kröhne, and Naumann (2017) explained that such happens because the non-linear presentation of information accessed through digital reading posts great cognitive demands impacting comprehension.

Evidently, there is growth in the number of electronic readers (e-readers). Preference for electronic-based reading is alluded to numerous reasons. One is it provides archiving convenience (Maden,2018). The absence of physical manifestation of books, magazines or other printed materials takes away one worry readers need to concern themselves with – the need for a place for safe keeping. Storage of e-materials does not take up any physical space at home, school or elsewhere (Latini,Bråten,Anmarkrud,&Salmerón,2019). Volumes of reading materials in electronic

form could be saved in one handy device. Another is the absence of paper cost because digital reading prevents the use of paper (Latini, et al.,2019) eventually leading to environmental benefit (Dundar & Akcayir,2012). Paper is needed for printing, and it is sourced from trees; hence, when reading is performed using electronic gadgets, money and trees are saved. Additional is that digital reading performed with the use of internet access spares one from the need to travel to libraries or bookshops because wherever can become a reading spot, and '*our personal library can travel with us anywhere*' (Martinez & Lopez-Rio,2015:106). This means that the limitation imposed by print reading which requires one to go to places like libraries to access books is removed when reading is done electronically. With respect to this, Latini, Bråten, Anmarkrud, and Salmerón (2019) claimed that access to materials (the digital ones) is instantaneous. One more reason for the preference of digital reading relates with the digital contents which are easy to copy and share, and are updated frequently (Rowlands,Nicholas,Jamali,&Huntington,2007).

Downsides of digital reading were also documented. Martinez, and Lopez-Rio (2015) pointed that when reading is done through the use of digital devices it is likely for one to be distracted. This is a reasonable claim as social networking applications (e.g. Facebook and Twitter) provide notification which might attract one to let go of reading and attend to the notice given by these applications. Another is that digital reading especially when under high levels of screen luminance is likely to increase eye fatigue (Benedetto,et al.,2014).

Indeed, benefits and detriments have been noted in the performance of digital reading. The practice may not be all good, but it is one that is noted to stay and be more prevalently practiced in the years to come. Therefore, it is essential that empirical studies such as this paper document the attitudes toward this technologically-driven approach in reading.

On Print Reading

The invention of the printing press in 1452 changed the course of human history. From then on, printed materials were exponentially produced as a source of information, communication and entertainment (Latini,Bråten,Anmarkrud,&Salmerón,2019). However, in the 1980s the demise of print was claimed to take place in the coming years

(Sun,Shieh, & Huang,2013). Indeed, it could not be denied that electronic gadgets are ubiquitous and are widely used both by young and old these days. However, researchers (e.g. Baron,Calixte,&Havewala,2017; Chao & Chen,2009; Kurata,Ishita,Miyata,&Minami,2017) remain to find great preference for print-based reading. This is supported by the findings of Yalman (2015) among investigated preservice teachers. In the study, a little more than half of the respondents claimed to prefer reading printed books over e-books. Therefore, the prediction was both a miscalculation and a gross underestimation of the influence of print materials.

Researchers identified reasons for people sticking to the traditional type of reading. One of which is that in reading text one could make print apostils (marginalia) which aids memory and facilitate reflections (Ramdarshan Bold & Wagstaff,2017). It must be noted that annotation could be performed electronically; however, its chirographic counterpart done on printed texts is found to be more multi-sensorial and meta-communicative (Fortunati & Vincent,2014). Another is that print reading is performed linearly and sequentially (Walsh, Asha & Sprainger,2007). As such, print-based reading allows more time for in-depth concentrated reading as compared to its digital version (Liu,2012). Relative to this, Rideout, Foehr and Roberts (2010) disclosed that the tendency to be distracted is great when learners are performing e-reading as compared to reading print materials. Furthermore, print reading is found to be the preferred version when readers intend to understand technical and hard-to-grasp contents (Myberg & Wiber,2015).

On Attitude toward Reading Versions

Variously, attitude has been defined. Relative to this there are numerous definitions of attitude (Somblingo & Alieto,2019). Lim, and Jhung (2019:84) maintained that attitude relates to '*how individuals feel about an activity and how they approach or avoid it.*' For Yıldız, and Kızıltaş (2018:27), attitude is generally a '*tendency, stance, reaction*'. And, for Erwin (2001), attitude is a guide determining choice, action and behavior (Erwin,2001). Therefore, it is important to understand and investigate the construct of attitude as it is a predictor of behavior.

Numerous investigations have documented varying and sometimes contradicting results accounting attitudes toward reading in print and electronic media. Conradi, Jang,

Bryant, Craft, and McKenna (2013) discussed that there is a prevalent preference for print when doing academic and leisure readings. This preference is taken to mean that positive attitude and inclination for the traditional approach to reading remain among people. In Wu, and Chen (2011), the same preference was found among students. The respondents claimed that if the reading materials are both available in print and electronic form they would prefer to have it in hardcopy. Contradictingly, Gunter (2012) claimed that students value electronic materials more than print ones even in cases where the reading content is available in both media. The author further claims that this points out to the little importance given to print. In a similar vein, Jang, and Henretty (2019:26) noted that '*most of these negative statistics regarding reading engagement and enjoyment reflected only reading print texts, not digital texts*'.

Therefore, the data provided by the literature is inconclusive. With this, this study realized not necessarily to debunk results of previous investigations and claims, but to contribute data taken from a unique contextualization, which would continuously augment essential understanding of the investigated variables.

Gender and Socioeconomic Status in Attitude toward Reading Versions

The variable gender is a variable most often juxtaposed in investigations across topics. Despite being a well-researched construct, authors remain to be in conflict as regards the use of the term. Toraman, and Özen (2019) explained that gender is not synonymous to sex as the former is a construct developed socially (Aydinoglu,2014 cited in Bacang,Rillo,&Alieto, 2019; Tannen,1990 in Torres,Pariña,Collantes,&Tan,2020) while the latter is a unchangeable biological characteristic (Toraman & Özen,2019; Lubaale,2020). However, studies have used the term gender to refer to the binary classification (e.g. Antonio,Probitchado,Ricohermoso,Saavedra,&de la Rama,2020; de la Rama,et al,2020; Devanadera & Alieto,2019; Nonte,Hartwich,&Willems,2018; Shahriza Abdul Karim,&Hasan,2007; Torres & Flores,2017). Thus, in this study, gender is operationalized to mean the classification of being a male and female.

Moreover, Nonte, et al. (2018) reported that, across countries, a consistent trend has been established in which females were found to significantly vary with males in terms of attitude toward reading – with females exhibiting the better attitude. This is true

both in recreational reading and academic reading (McKenna,Kear,& Ellsworth,1995). In the study of Eijansantos et al. (2020), gender is found to have influence on attitude toward print reading with females manifesting better attitude; however, the same does not hold true with attitude toward digital reading as gender was found to have neutral effect.

Socioeconomic status, on another hand, as claimed by Cheng, and Wu (2017) is widely factored in research investigation in various fields even in previous years. This means that it is a concern and interest among scholars. One of the latest studies that investigated the influence of SES is the study of Horton-Ramos (2020). The investigation found that electronic reading habit is correlated with SES – the relationship is moderate, linear and positive. This means that as the SES of the respondents increases the better digital reading habit they have which is suspected to mean positive digital reading attitude.

Considering that both versions of reading entail financial requirements for the purchase of print materials and access to the internet, it is interesting to determine whether one's SES impacts one's attitudes toward two versions of reading.

Research Questions

This cross-sectional investigation on attitudes toward the types of reading among preservice teachers purposed to answer the following questions:

1. Is there a significant difference between the respondents' attitude toward print reading and their attitude toward digital reading?

2. Is there a significant difference in the attitudes of the respondents toward types of reading across gender?

3. Is there a significant relationship between attitudes toward reading versions and the SES of the respondents?

4. Is there a significant relationship between the respondents' attitude toward print reading and their attitude toward digital reading?

Methodology

Research Design

This empirical investigation employed a descriptive-quantitative-correlational design. Kothari (2004) explained quantitative design is an appropriate design to employ when the study intends to quantify a phenomenon or phenomena such as in the case of this study which purposed to measure the latent variable attitudes toward text and electronic readings. In addition, the study is classified as descriptive as it intends to simply report the attitudes of the respondents without the control and manipulation of variables involved in the study (Kothari,2004). Addedly, Calderon (2006 in Alieto & Rillo,2018) explained that descriptive research is the kind that purposes to gather, collect and tabulate data interpretation which should be both adequate and accurate as realized in this study with respect to the investigated variables. Additionally there was no establishment of control group and experiment groups as the study is non-experimental (Torres & Alieto,2019b).

In addition, the study utilized the survey method as it is the one used in the attempt of determining status of the phenomena (Singh,2006) - attitudes toward reading versions as in the case of this investigation. Toward this end, the study operated with a survey tool as an effective means data gathering approach involving large sample size (Dillman,Smith,&Christian,2009).

Respondents of the study

The current investigation on the attitudes toward print and digital readings is realized with preservice teachers as the study group. Purposive sampling was employed in determining the respondents enlisted in this study. In total, 308 respondents enrolled in a state university based in a non-metropolitan city in the Philippines form part of the sampling frame of the research. The youngest of the respondents is aged 18 while the oldest reported to be 25 (Mean [M] – 22.87, Standard deviation [SD] - 2.28). Table 1 provides the characteristics of the respondents across demographics.

Table 1.0

Respondents' gender distribution cross-tabulated with their socioeconomic status (SES)

| Gender | Socioeconomic Status | | | N |
	Low	Middle	High	
Male	28	50	13	91
Female	60	110	47	217
N	88	160	60	308

The above table presents the characteristics of the respondents with respect to gender and SES. It could be noticed that the sample size is greatly dominated by females constituting 70% of the total sampled population. This data noting the dominance of females in teacher education courses is similar to previous investigations conducted among preservice teachers like in Alieto (2019) in which from the 1080 surveyed preservice teachers, 68% of which are females. Another is the study of Somblingo, and Alieto (2019) among 1054 preservice teachers in which 76% or 802 are females. Additional is the work of Ricohermoso, Abequibel, and Alieto (2019) with 330 education students in which 76% are females. These data suggest that the teacher education course attracts more females than males. It is supposed that teaching, as a career choice, is more popular among females than it is among males in the Philippine context.

Moreover, in total, the distribution revealed that most of the respondents (52%) reported to be of average SES. Cross-referenced with gender, 51% of the females while 55% of the males belong to average middle SES. On another note, 31% of the females and 28% of the males claimed to be of low SES. This implies that students enrolling in a teacher education program come from middle and low SES; however, mostly are from average SES.

The Research Instrument

This study adopted the survey tool of Eijansantos, et al. (2020) named as Attitude toward Print and Digitized Reading Questionnaire (APDRQ). The said instrument was with a declared reliability of 0.811 and was originally used with senior high school students. The researchers evaluated the items in the questionnaire to determine

appropriateness of the tool with respect to the current objectives of the study and context, specifically the respondent choice of the investigation. In addition, the same instrument was pilot tested with 50 preservice teachers who did not take part in the investigation. The data from the pilot test was coded and analyzed using Cronbach's alpha test. It yielded a reliability of 0.800. Even though there was a decrease in reliability, the instrument remains to be characterized as of 'good' reliability (George & Maller,2003). Thus, the adoption of the research tool was made. Moreover, the instrument consists of 30 statements answerable with a four-point Likert scale ranging from (Agree to disagree/ Like me and not like me). The even rating scale was kept without modification to remove the inclination of participants to answer at the midpoint of the scale – known as the error of central tendency (Singh,2006).

Out of the total 30 items, half of which intends to measure the attitude toward print while the remaining measures attitude toward digital reading. Moreover, the 15 items are subdivided into three aspects of attitude (affective or feeling, belief or cognitive, and behavior). The distribution of items are as follows : attitude toward print (affective [1,7,13,19, and 24], belief [2,8,14,20, and 26], behavior [3,9,15,21,and 27]), and attitude toward digital reading (affective [4,10,16,21, and 27], belief [5,11,17, 23 and 29], behavior [6,12,18,24,and 30]). The original placement of the items were maintained in the development of the questionnaire as it subscribed to a mechanism of alternately placing the items in the questionnaire to minimize set bias when respondents answer the survey (Heppner & Heppner,2004).

Data Collection Procedure

Respondents were first identified. Communication was conducted informing participants of the nature and objectives of the research. Emphasis on the idea that the study is voluntary and in no way non-participation would affect them negatively. In like manner, they were informed that there would be no reward or merit of any form be given to those who would participate. For a total of 400 questionnaires produced and distributed, only 315 were successfully collected and seven of which were ineligible for analysis as there were missed items or double entry; thus, only 308 were used for analysis in this study suggesting a 77% response rate.

Coding Procedure

This investigation on the attitudes toward reading types employed the following coding scheme to enable the analysis of the data: for the dichotomous variable gender, 1 is for male and 2 is for female; for the polychotomous variable socioeconomic status, 1 is for low, 2 is for middle and 3 is for high; for the responses in the survey tool, adoption of the coding procedure performed by Eijansantos, et al. (2020) was realized which was 1 for like me, 2 for somehow like me, 3 for somehow unlikely to be me, and 4 for not like me (for items in the feeling and behavior subsections) and 1 for disagree, 2 for somehow disagree, 3 for somehow agree, and 4 for agree (for items in the belief subsection).

Additionally, the adoption of the print and attitude scale was made to provide interpretation of the mean score. Table 2 presents the scale.

Table 2

Print and E-Reading Attitude Scale

Range		Attitude toward Print Reading/E-Reading		Interpretation
3.25	4.0	Like me	Agree	Positive Attitude
2.5	3.24	Somehow like me	Somehow agree	Somehow Positive
1.75	2.4	Somehow unlikely to be me	Somehow disagree	Somehow Negative
1.0	1.74	Not like me	Disagree	Negative Attitude

Statistical Treatments

In order to draw meaning from the raw data and to test the offered hypotheses of the study, the data were analyzed with appropriate statistical treatments. However, prior to the performance of statistical treatments, the data was first tested for normal distribution using the Shapiro-Wilk Test. The analysis disclosed that the p-values are greater than alpha = 0.05 and non significant which suggests that the data are normally distributed, and parametric statistics are appropriate for use (Singh,2006).

The following were the parametric statistical tools utilized in this current study:

To determine whether significant differences in the attitudes toward print and electronic readings of the preservice teachers exist, the statistical tool known as paired

sample t-test was employed. For the determination of significant difference in the attitudes of the respondents across reading versions across gender, the statistical tool known as t-test for independent sample was used. To determine the significant difference in the attitudes of the respondents across reading versions across socioeconomic status, the statistical tool known as one-way analysis of variance or one-way ANOVA was utilized. For the determination of significant relationship between the respondents' attitude toward print reading and attitude toward digital reading, Pearson Product Moment Coefficient or Pearson *r* was employed.

Results and Discussion

Difference in Attitudes toward print and digital reading

Responses in the questionnaire were grouped. Items for attitude toward print reading (AtPR) were collated according to the determined aspects and treated. The same holds true for the items determining attitude toward digital reading (AtDR). Moreover, the test of normality revealed that the p-value is 0.200 which is non-significant; thus, the statistical treatment used for analysis is the Paired Sample T-test. Table 3 shows the analysis.

Table 3

Difference: Respondents' attitude toward print reading and attitude toward digital reading

Variables	M	SD	Description	p-value	Interpretation
AtPR	2.331	0.420	Somehow Negative	0.000*	Significant
AtDR	2.063	0.461	Somehow Negative		

*Significant at alpha = 0.0 (2-tailed), (Scale: 1.0 to 1.74 [Negative], 1.75 to 2.4 [Somehow Negative], 2.5 to 3.24 [Somehow Positive], 3.25 to 4.0 [Positive Attitude])

It could be gleaned from the table that the respondents manifest a 'somehow negative' attitude toward both reading versions. The said attitudes are gearing toward being negative. This, to an extent, mirrors that finding of St Clair-Thompson, et al. (2017) that learners today are not inclined to read – this is true in either type as found in this

study. In a similar vein, Rahmawati, et al.] ` (2020) noted that ESL and EFL learners identify reading as a frustrating process making it less inviting which could be deduced to suggest a 'negative' attitude. Along this line, Shahriza Abdul Karim, and Hasan (2007) claimed that positive attitude leads to positive reading experience; however, it is maintained that the other direction is also true. In other words, a positive reading experience results in positive attitude toward reading. Thus, if students find reading a difficult and discouraging task, their attitude towards reading would be negatively shaped. Hence, Navarrete (2018) noted that there exists a great challenge among educators with respect to letting students learn to read and having them read to learn. This concern, the author further claims, is a global concern. This data lends support to the claim and signals the need to have this issue addressed.

Moreover, there is a significant difference between the respondents' attitude toward print-based reading and attitude toward digital reading significant as the p-value (0.000) is less than alpha = 0.01; therefore, the null hypothesis is rejected. As suggested by the mean score, the respondents' AtPR is better than their AtDR (mean difference = 0.268). It is inferred that the respondents are more inclined to perform print reading (PR) over digital reading (DR).

The finding to an extent confirms the investigation of Yalman (2015) conducted among preservice teachers totalling to 543. In the study, it was descriptively determined who among the respondents prefer reading traditional printed texts over electronic books. It was noted that more than half prefer to read traditionally. This is similar to the findings and observations of researchers (Baron, et al.,2017; Chao & Chen,2009; Kurata, et al.,2017) that print-based reading remains a prevalent practice in this digital age. This preference is taken to mean positivity toward print reading.

In Yalman (2015), the author probed the reason for the preference. It was found that the pre-service teachers lack knowledge about electronic materials such as the e-books. However, the context of the study makes the claim improbable to support this finding. It is argued that the preservice teachers in this study were born during the digital era as suggested by their age profile. This then proposes that this group belong to those who have good grasps of technology and digital contents.

Horton-Ramos (2020) afforded a more plausible explanation. In her study, she found that the SES of the respondents positively correlate with their e-reading habit. In other words, those who have high financial capacity are likely to develop their digital reading habit as compared to those with low financial status. Against this, it is reasoned that the financial cost entailed by the performance of digital reading contributes negatively to the attitude toward digital reading of the respondents; hence, the identified statistical difference.

Interestingly, authors like Latini, et al. (2019) explained that one benefit of electronic reading is that it saves cost for the purchase of print materials. However, the idea that digital reading does incur cost is not completely true. Although the researchers submit that there are contents available and free of access, there are contents that come with a prize. In addition, for one to have internet access, one needs to pay as internet connection in the context of the respondents of the study who are not afforded with free internet access.

Difference: Attitude towards reading types across gender

The test of normality for AtPR and gender (p-value = 0.311) and AtDR and gender (p-value = 0.211) provides that the data are normally distributed; hence, to determine difference in the AtPR and AtDR between the male and female respondents, independent sample t-test was used. Table 4 gives the analysis.

Table 4

Attitudes toward reading versions between male and female respondents

Variables			M	SD	Desc.	Sig.	Interp.
Dependent	**Independent**	**Categories**					
AtPR	Gender	Male	2.382	0.421	SN	0.249	Not Significant
		Female	2.316	0.420	SN		
AtDR		Male	2.065	0.465	SN	0.987	
		Female	2.063	0.461	SN		

(Scale: 1.0 to 1.74 [Negative{N}], 1.75 to 2.4 [Somehow Negative {SN}], 2.5 to 3.24 [Somehow Positive {SP}], 3.25 to 4.0 [Positive Attitude {PA}])

As noted from the table above, for the variable AtDR, the arithmetic mean between the male and female respondents varies with the males having better attitude as shown by the mean scores with a difference of 0.066. However, the difference noted is not statistically significant as suggested by the sig. value = 0.249 > than α = 0.05. This means that the male and female respondents do not significantly differ in their attitudes toward print-based reading. It could be inferred that gender is not a factor influencing the AtPR. Hence, the formulated null hypothesis of this study is accepted.

This result of study counters the findings of previous studies like that of Mohd-Asraf, and Abdullah (2016), and Ubbes, Dillhoff, and Maldonado (2018) which confirmed that there is an emergent trend of females having better attitude than boys over reading. In addition, this particular finding rejects the finding of one of the latest research topics by Eijansantos et al. (2020). In the said investigation among Filipino senior high school students revealed that males significantly differ with females with respect to attitude toward print reading. The said study found that females are exhibiting better AtPR compared to males suggesting that there is gender difference as regards AtPR.

With respect to AtDR, the sig. value = 0.987 > α = 0.05 suggests that, statistically, the female and male respondents do not differ in their AtDR. Along this line, it is claimed that gender is not a factor resulting variance in AtDR. Thus, the null hypothesis of the study for this question is accepted. This finding supports the result of the study of Eijansantos et al. (2020). In their study, although gender significantly influenced AtPR, it does not have the same significant effect with respect to AtDR. On another hand, the finding counters the claim of McKenna, Conradi, Lawrence, Jang, and Meyer (2012) which discussed that females were noted to be better at digital academic reading and are generally exhibiting better attitude as opposed to males.

The disclosed finding that regardless of versions and genders the respondents are showing an attitude characterized as '*somehow negative*' is supposed to be due to two reasons. One relates to comprehension. Most of the reading tasks and activities are in English the second language. Because the act of reading in whatever form requires a good deal of proficiency in the said language, it is suspected that students with poor level of English proficiency are challenged with respect to comprehension which is why

Rahmawati, at al. (2020) maintained that reading in English is frustrating to ESL and EFL learners. It is further remarked that comprehension is the heart of reading. Continuous and engaged reading is performed by those who understand well what they read. Therefore, if comprehension is compromised brought about by any reason, reading presents before learners as a task far from being enjoyable. Another is that which associates with the characteristics of present day learners as pointed in the study of Eijansantos, et al. (2020). The authors posit that learners today prefer watching as a means of gaining information over reading. Relatedly, Eijansantos (2018) observed the high-volume use of social media of respondents for their postings which invloves a great deal of viewing, too. There is a sound basis for this notion. Watching is more appealing than reading even with digital contents. This supposition provides interesting pedagogical implications which should be explored in future research works.

Correlation : Attitude toward versions of reading and SES

The test of normality for AtPR and SES (p-value = 0.221) and AtDR and SES (p-value = 0.300) provides that the data are normally distributed; hence, to determine the relationship between AtPR and SES, and AtDR and SES, the statistical treatment known as Pearson Product Moment Coefficient or Pearson r was utilized as statistical tool. Table 5 presents the analysis.

Table 5

Correlation : Respondents' attitude toward reading types and their SES

Variables		p-value	Interp.	r-value
AtPR	Socioeconomic	0.004**	Significant	-0.165
AtDR	Status	0.000**		0.249

**Significant at alpha = 0.01 (2-tailed)

As observed from the table, with respect to AtPR and SES, the p-value (0.004) is less than $\alpha = 0.01$ which implies that there is a significant relationship between the treated variables. Moreover, the relationship's strength of association is small and the

relationship is negative as inferred from the r-value (-0.165). This means that the lower the SES of the respondents the positive their attitude toward print reading. It implies that those with high socioeconomic status manifest 'lesser' attitude toward print in comparison to those with low SES. It could be further implied that learners of high financial capacity do not prefer reading in print as opposed to those who reported to have low or average SES. With respect to AtDR and SES, the p-value of 0.000 is less than alpha = 0.01 which means that there is a significant correlation between variables. Additionally, the association is small and positive. Therefore, it means that as SES increases the AtDR also increases. Thus, respondents of high socioeconomic status have positive attitude as compared to those with low SES. Conversely, respondents with low SES have negative AtDR. As a result, it could be deduced that SES is a factor influencing AtDR. Hence, the stipulated null hypothesis of the study is rejected.

From these results, it could be implied that those with stable financial status prefer digital reading while those with lower financial capacity prefer print reading. These findings support the conclusion of Horton-Ramos (2020) that those with high SES are the ones likely to read electronically and eventually develop e-reading habits. The same author supposed that this is so because online reading requires two essential things prior to the act – one is a digital device capable of accessing the Internet and perform online search; second is the need to have mobile data to enable access to the internet. These two do not come for free. In fact, it is pointed out that the device needed to satisfactorily perform online access is expensive. The same also holds true as regards the amount needed to be spent to gain internet access. The financial demand of DR is supposed to discourage those with low SES. This also explains the positive attitude of those with low SES toward print-based reading.

Further, it is suspected that those with high SES appreciates the ease of digital reading as previously discussed in this paper. Because they could afford, the ease of doing electronic reading is inviting and appealing for them while the struggles of keeping physical reading materials appear troublesome for them.

Correlation : Attitude toward Print Reading and Attitude toward Digital Reading

To determine the relationship between AtPR and AtDR, the statistical treatment known as Pearson r was utilized. Table 6 gives the analysis.

Table 6

Significant relationship between attitudes toward reading versions

Variables		p-value	Interp.	r-value
AtPR	AtDR	0.000**	Significant	0.249

**Significant at alpha = 0.01 (2-tailed)

As seen from the above table, the p-value of 0.000 is less than alpha equals 0.01. This means that there is a correlation between the respondents' AtPR and AtDR. The relationship is positive and linear; however, the strength of association is small. This means that the respondents with positive attitude toward text-based reading are the ones with positive attitude toward digital reading; conversely, those with negative attitude toward print reading are the ones with negative attitude toward digital reading. Therefore, AtPR and AtDR correlate with each other.

This finding counters the claim of Foasberg (2014). The author found that learners who read print materials have a dislike for reading electronic counterparts. In addition, this result also contradicts the report of Kretzschmar, et al. (2013) that there is an exclusive platform chosen by readers. In the study, it was claimed that those who read in print do not read digital contents. However, in this study, it could be deduced that those who read in print are likely to read digitally. And, those who do not like reading in print are the ones less likely to read digital contents.

Supporting this result is the study of Loh, and Sun (2019) which found that, contrary to the popular belief, people who are engrossed with digital reading avoid print reading. In their study, it was revealed that people who read print also read digital contents. This suggests the idea that when one finds pleasure and need to read one engages in reading regardless of the media. Similarly, the study corroborates with the claim of Eijansantos, et al. (2020). In the study the authors conducted, it was found that

the two same variables are related with each other. Meaning, there is an association between AtPR and AtDR. This result proves that such relationship existing between studied variables is not only true in the case of basic education students, but also among students of higher education.

Conclusion

Drawing from the results of the study, the following conclusions are afforded: The most astounding is that attitudes toward reading versions significantly vary with attitude toward traditional reading better than the modern and technologically driven type. Equally astounding is that respondents' SES influence both attitudes with different relationship directions (negative for print reading, and positive for digital reading). Another interesting thing to note is that there is a significant association between investigated attitudes suggesting that one attitude predicts the other. Less interesting, yet intriguing as it refutes existing trends favoring females over males, is that gender has neutral influence on both attitudes.

Implications

Teachers—pre-service and in-service alike—form an integral component in the educational environment and process; thus, what they know and the habits they possess are relevant to the kinds of learners and citizens honed and produced. In this study, the more profound concern is slightly skewed toward the variation in the attitudinal preference of reading versions but tremendously concern the negative attitude toward the act and/or habit of reading. It is duly noted that on the account that the respondents' attitudes towards reading is quite negative, their habit and preference to carry out the act of reading are most prospectively on the negative sphere also. Hence, owing to this finding, the education sector ought to address this issue in ways it may have not ever done before as reading is an imponderable part and parcel of teachers' continuing education and the students' learning furtherance.

Moreover, as teachers prepare their schoolroom curriculum, it is imperative for them to recognize their students' reading interests and preferences. Society is moving into an electronic age and students will be expected to be able to read and comprehend from

various mediums of text. This analysis can provide teachers with information about their students' attitude with respect to types of reading. When teachers have this information, they can structure class lessons and activities with the medium students prefer to help them gain a more positive attitude toward reading overall. For example, in a classroom with most students who prefer to read from an e-reader, the teacher could plan lessons that allow students to complete their reading from a digital text instead of a print text. Furthermore, lessons can be designed to increase attitudes towards reading other mediums of text. For example, students who prefer reading from digital text can complete some reading tasks from the device and the teacher can make connections to Internet reading and/or print reading based on the e-reader. This will help students become engaged with multiple mediums of text. The same goes to the group of learners with respect to gender and their SES.

As far as SES is concerned, principals and other educational leaders need to make a lot of important decisions about where to apportion funds and what materials to procure and to help increase students' knowledge. Allocation of monetary or technological provision and assistance to teachers is helpful and necessary in that a better SES correlates the development of better e-reading habit; Specifically, the technologic provision is for the availability of cutting-edge gadgets to be utilizable in the reading enterprise, while the monetary assistance is for the consistency of internet connectivity which is indispensable in prolific digital reading. Likewise, the suggested provision will in a way address the concern in the preceding paragraph that is the negative attitude towards reading needs addressing and attention. Moreover, this will attempt to strike a balance among those whose reading attitude is positive for print reading as they can likewise cultivate a positive attitude towards reading digitized materials.

The concern of reading among pre-service teachers may not be deemed significant and be regarded as irrelevant presently, but these teachers will most likely land a pedagogically-related work and their impact, positive or otherwise, will vivify in the generation of learners yet to come. As far as this scholarly investigation is concerned, the trend seems to be treading the path of the intensification of negative attitudes towards reading. If issues unearthed in this study linger in deaf ears and foster inaction among the authorities of the education sector and the members of the academe, more adverse effects

may manifest which will eventually toughen and become more taxing to address much less eradicate.

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